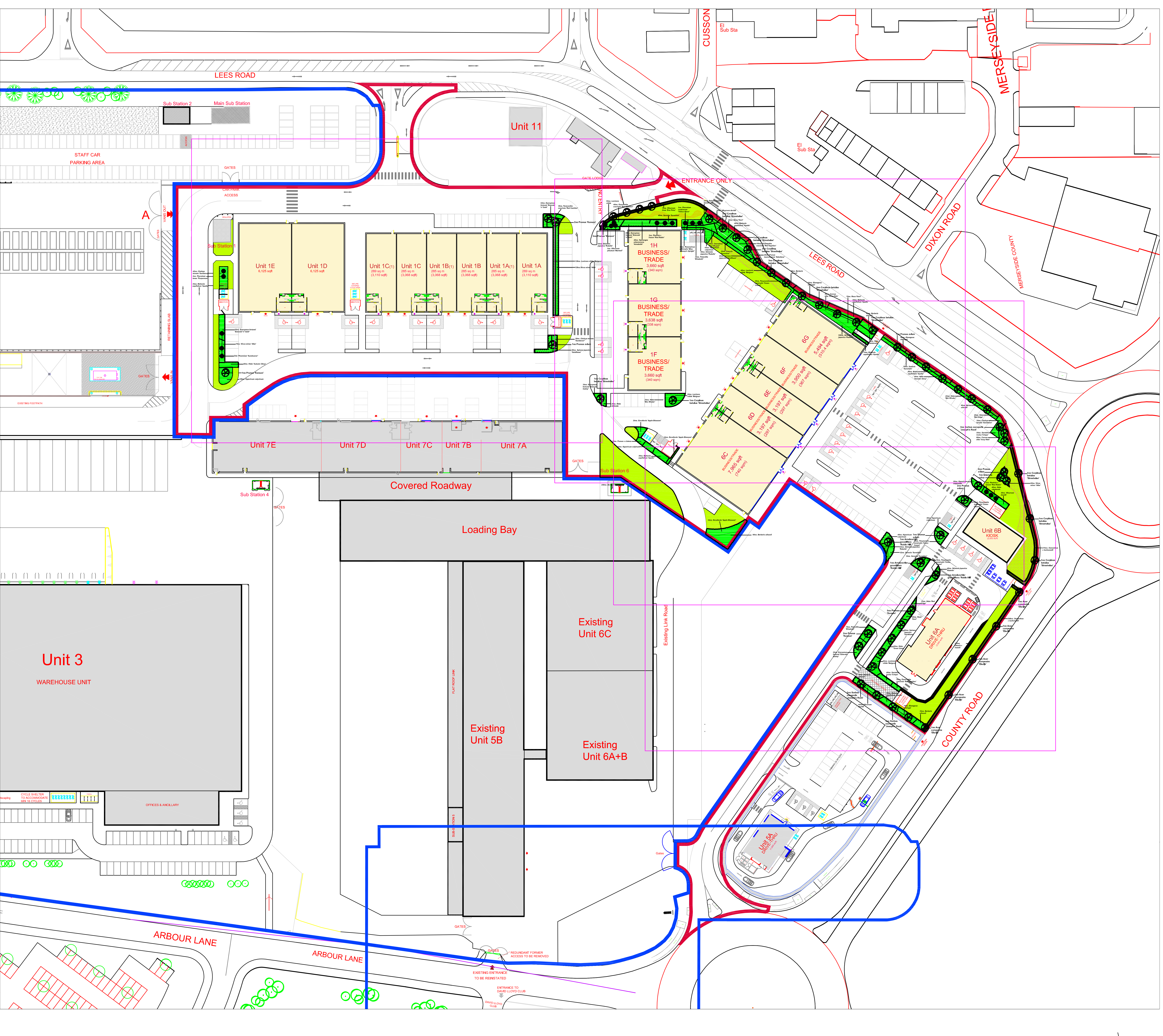
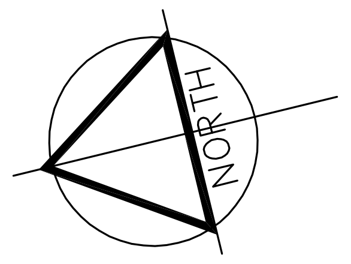




# ACADEMY BUSINESS PARK, KNOWSLEY

## Landscape Proposals

REFER TO DRAWING 2271_10 FOR PLANTING SCHEDULES AND SPECIFICATION

## SOFT LANDSCAPE SPECIFICATION

### Generally

1. Materials and workmanship shall generally be in accordance with the following documents:
2. *BS 3936-1; 1992 Nursery stock; Specification for trees and shrubs*
3. *BS 8545:2014 Trees: from nursery to independence in the landscape*
4. *BS 4428:1989 Code of Practice for General Landscape Operations*
5. Trees and other vegetation to be retained shall be protected in accordance with the provisions of *BS 5837:2012 Trees in relation design, demolition and construction - recommendations*
6. *BS 3882:2015 Topsoil*
7. Plant handling, storage and transport. Lifting, packaging and transporting shall be to CPSE (Committee for Plant Supply and Establishment) 'Handling and establishing landscape plants' (obtainable from the Horticultural Trades Association) Part I, Part II, and part III, paragraphs 1.3.3 to 1.3.6. 3.0 and 4.0.

### Ground preparation

8. Groundworks for proposed planting shall be in accordance with BS 4428:1989.

For Tree planting

9. Areas for proposed tree planting shall be cleared of unsuitable materials, debris, concrete and the like to a depth of 900mm below ground level within a 2.0m radius of each tree. A minimum of 600mm depth of imported topsoil shall be supplied for planting of trees.

For Shrub planting

10. Areas for shrub and groundcover planting shall have clearance of weed growth and unsuitable material to a depth of 600mm. A minimum of 400mm imported topsoil shall be supplied for planting of shrubs and groundcover. The bottom layer may be made up of approved sub-soil. The formation levels to all planted areas shall be ripped and broken up as necessary to a depth of 200mm to achieve suitable drainage.

11. A 50mm layer of approved non-peat based planting compost shall be applied over the whole surface of planting areas and cultivated into the soil.

11. All levels shall be brought up to an even grade to approved cambers, 25mm below adjacent kerb lines. The soil shall be firm with the top 25mm cultivated to a fine tilth. ENMAG or similar approved granular fertiliser shall be worked into the soil at a rate of 70 grams/$m^2$ to all areas to received planting.

12. All topsoil shall be stone picked, removing stones with a dimension in any direction of 25mm or over and re-graded to marry into adjacent levels prior to planting.

For Turfed areas

13. Where areas are specified to receive imported topsoil prior to turfing, the surfaces shall be graded and then covered with a layer of imported topsoil which shall be 150mm thick after compaction settlement.

14. The level of the topsoil shall be 25mm above all kerbs and footpath levels etc. after subsidence and compaction.

For Amenity grass seeding

15. Where areas are to receive amenity grass seed the area shall be covered with a layer of imported topsoil or cultivated in situ topsoil to a minimum depth of 150mm.

For Wildflower seeding

16. Where areas are to receive wildflower/ grass seed the area shall be covered with a layer of imported clean or cultivated in situ subsoil to a minimum depth of 150mm.

### Planting

Generally

17. All planting shall be performed by experienced workmen, in accordance with the recognized best horticultural practice and under the supervision of the Contractor's skilled foreman.

Tree planting

18. All trees shall be planted into pits which are dug at least 150mm wider and 75mm deeper than the existing root system/rootball. Pits shall be dug with vertical sides and the bottom and sides of the pits loosened with a fork to assist in free drainage and root penetration. Any extraneous matter including weeds, broken brick and large stones shall be removed.

19. Excavated topsoil shall be set aside for reuse. The pits shall be backfilled with topsoil incorporating 2 nr 80 litre bags of tree planting compost.

20. All trees shall be staked and tied as specified.
Stakes shall be 75mm diameter round section, peeled and pointed larch stakes. Ties shall be made from recycled PVC spacers.
Heavy standard trees to have 1 stake and 2 approved tree ties.
Extra heavy standard trees to have 2 stakes and 3 ties OR 2 low stakes with a cross-piece bar with tree secured with a PVC strap.

Shrub planting

21. All plant stock, shrubs and trees shall comply with the specified heights, spreads and container size as listed in the schedules. Any material which does not comply as delivered from the supplier shall be removed from the site and immediately replaced by the Contractor at his own expense.

22. All plants shall be free from disease, infestation and infection. They shall be first-class representatives of their normal variety or species and shall have average or normally well-developed branch systems together with good, vigorous, fibrous root systems through having been transplanted in the nursery from time to time according to the needs of the species. All plants should also comply, as a minimum standard, with the *Specification of Standards for British Container Grown Stock*, published by the Horticultural Trades Association June 1981.

23. Supply, storage and delivery of plants shall comply with the Plant Handling Code published by CPSE.

24. Planting shall be carried out in accordance with the drawings and/or Bills of Quantity if applicable. The number of each species and variety of plants will be evenly distributed over the allocated areas, making due allowance for adjacent groups. The Contractor shall clearly mark boundaries of planting areas, peg out beds and positions of plants and obtain approval of all setting out before commencing any planting.

25. All shrubs shall be planted in pits 300mm deep and 300mm square.

26. All planted ares shall receive a 50mm layer of ornamental bark mulch to suppress weed growth during the establishment period.

Transplants and whip planting

27. The nature of the material to be planted is variable and the contractor shall allow for planting to be properly carried out in all cases as described in BS.4428: 1989.

28. All plants shall be planted to an equal depth as they were grown in the nursery. Roots shall not be bent, broken or forced into inadequate pits or notches.

29. Plants shall be upright, firmed in and wind resistant, with no air pockets around roots.

30. All wrappings arising shall immediately be picked up and stored ready for removal to tip.

31. Plants shall be planted at the specified centres. On steep slopes this shall be the horizontal measure.

32. All whips and transplants shall be supplied and installed with 80mm diameter green tree shelters to transplants, fixed into ground with pegs. Do not apply to feathered stock.

33. All conifers and holly species shall be supplied & installed with 250mm diameter fine mesh guard with 2no. stakes.

34. All stock shall be notch planted with the exception of feathered stock and holly species which shall be pit planted.

Plug Plants

35 All plug plants shall be planted into bare soil and or grass. Any existing grass thatch shall be screefed or scarified in order to allow the plugs contact with the soil.

36 Planting shall be carried out in autumn to late spring

### Turfing

37. All areas to receive turf shall be clear of all debris, concrete and like and the base of these areas shall be broken out to relieve any compaction and so aid water drainage.

38. All areas to receive turf shall be topsoiled to a depth of 150mm. All topsoil shall be cultivated to a fine tilth, stone picked and graded to receive turf.

39. The turf shall comply with the recommendations of BS 3969 and shall be good quality meadow turf, fibrous, well rooted, mown, free from matted or dead grass and free from pernicious weeds following treatment by selective weedkiller not less than 4 weeks and not more than 3 months before lifting. The turf shall comprise of a mixture of at least two of the following grass varieties:-

- Dwarf ryegrass
- Smooth stalked meadow grass
- Creeping red fescue
- Chewings fescue
- Browntop bent

40. The turves shall be approximately 400mm x 1370mm and not less than 35mm thickness evenly throughout.

41. Turf must not be brought on site nor laid until the topsoiling, ground cultivation etc, to the turf areas has been approved by qualified persons. Any turf brought on site or laid prior to such approval shall be deemed to have been brought on or laid at the Contractor's own risk and he shall be instructed to lift and/or cart away such turf off the site and replace/re-lay at his own expense, unless instruction in writing to the contrary shall be given.

42. Turfs shall be unloaded from the supplier on an area clear of that to be turfed.

43. Turfs shall be laid in rows on the prepared bed of soil commencing at the near end of the area and laid progressively by placing planks over the last row of turfs laid and laying subsequent turfs therefrom; the planks to be moved forward as each line of turfs is laid and so on to the end of the area. Turfs from the pile as unloaded shall be wheeled to turf layers on three rows of planks laid closely side by side. The turfs shall be laid with half lapped joints, well butted up and bonded. No roller shall be used unless so directed.

44. Any disparity in finished levels owing to variation in turf thickness of unequal consolidation of soil shall be adjusted by raking and/or packing fine soil under turfs to obtain an even surface to the whole.

45. All turf shall be laid 25mm above the height of adjacent kerbs.

46. Whole turfs shall be used at edges of boarders, beds margins etc. and they shall be carefully trimmed square and true to line.

47 The turfed areas shall be top dressed to a depth of 6mm with an approved top dressing material well brushed in to completely fill all joints.

### Seeding (amenity and wildflower) – where applicable

48. All areas to receive seeding shall be clear of debris and the like.

49. All areas to receive grass seed shall be cultivated and brought to a fine tilth by raking and harrowing within the top 25mm. All debris, including stones of 25mm or over, brought to the surface shall be removed off site.

50 Areas of amenity grass seed mix shall receive a suitable fertiliser seven to ten days prior to seeding

51. Areas of wildflower seeding shall not receive fertiliser.

52. The specified seed mix shall be sown at the supplier's recommended rate. The quantities of seed shall be divided in half, and sown evenly in transverse directions and the seed shall be raked or harrowed in. The seed shall not be drilled. Sowing shall be carried out during calm weather. All sowing is at the contractor's own risk and any areas where germination fails shall be re-seeded at the contractor's own expense.

53. Areas of amenity grass seed mix shall receive a pre emergent herbicide applied immediately after seeding.

Protection of Newly Seeded Areas

54. All reasonable precautions shall be taken to ensure that pedestrian and other traffic does not cross the grass areas during cultivation, seeding or until grass is established. Where obvious 'short-cutting' is occurring, the contractor shall erect an approved temporary fence so as to minimise the maintenance period or until such time as it is no longer necessary, or as directed.

### Bulb planting – where applicable

55. Bulbs, corms and tubers shall comply with BS 3936 Part 9 for sizing and shall be free of rot and disease. They shall be planted at 1.5-5 times their depth with at least 75mm depth of soil covering the bulb. Bulbs shallbe randomly distributed within the area designated at approximately 25no. per metre square

### Establishment maintenance

Shrub areas

56. Following planting works all shrub beds shall receive a 50mm layer of mulch composed of ornamental bark flakes.

57 All shrub beds shall be kept weed free until the property is occupied.

Turfed areas

58. The turf shall be cut to a height of 50mm on the first cut and to a height of 30mm thereafter by cylinder mower at a frequency of once every two weeks or until the property is occupied.

59. Mowing shall take place to the full extent of the grass up to the paving, other boundaries to grass areas and under all fence lines.

60. All edgings to borders and where grass overhangs vertical edges of path edging strips, shall be cut with shears as appropriate.

61. During a drought period the cutting height shall be raised to 40mm and mowing shall continue so long as the grass growth continues to reach maximum allowable height

62. Any bare or damaged patches shall be removed and levels made up sufficient to take replacement turfs. The base of the area shall be lightly broken up and levelled prior to final replacement of the turf.

Amenity grass seeding – establishment

63. When amenity grass mix is 100mm high it shall be lightly tipped by approximately 25mm with an approved mower.

64. Any areas which fail to germinate shall be re-cultivated and re-seeded, within one month of the original seeding.

65. Areas of broad leaved weeds shall be cleared by either hand pulling or spot treatment using a selective broadleaf herbicide.

Wildflower seeded areas - establishment

66. Newly seeded areas shall be cut to:
4cm in March, May and September in year 1.

Wildflower seeded area – following establishment of sward

67. Invasive broad leaved plants such as dock, thistle etc. shall be spot treated with an approved selective herbicide in years 1-2. Thereafter they shall be mown out.

Bulb planting

68. Following flowering, bulb areas shall be left uncut for an interval of a minimum of 6 weeks. Thereafter, all arisings shall be removed from site following cutting and maintained as amenity grassland.

### Maintenance Generally

69. All areas of planting shall be maintained up to practical completion. Maintenance shall include regular watering in periods of dry weather to maintain healthy growth, weeding by hand and by selective herbicide and control of any insects, fungus and other diseases by means of spraying with an approved insecticide or fungicide. Pruning to remove any damaged branches shall be undertaken together with the adjustment and repair of tree ties necessary to ensure proper and healthy growth of the plants and trees.

70. All planted areas shall be kept neat in appearance, weed free by manual processes and including the removal of any sprayed out dead weeds, litter and prunings.

71. The defects liability period shall be 5 years from practical completion. During this period any trees and shrubs or other plants that are removed, damaged, die or fail to thrive shall be replaced as soon as practical unless the Local Authority gives written consent to any variation. Any such replacement shall be cultivated and maintained for 5 years and any failures within that 5 years shall be replaced to the satisfaction of the Local Authority. All replacement stock shall comply with the original specification and be obtained from a reputable nursery.

### Rectification of defects

72. All plants and trees shall be seen to be in a healthy and vigorous condition at completion of the installation phase. Any shrubs or trees which fail to develop following a 12 month period after planting shall be replaced at the contractor's expense except where such failures are directly attributable to vandalism. The replacement shall be to the same specification, including all work to pits, compost and fertiliser etc.

## KEY

- ⊗ Proposed standard tree planting.
- 🟩 Proposed amenity and wild life attracting shrub species. Ground cover to approximately 1200mm high.
- ● Proposed specimen shrubs
- ▬ Proposed hedgerows - maintained to a maximum of 1200mm high.
- 🟩 Proposed areas of amenity grassland.
- ▨ Proposed areas of wildflower seeding.
- ▨ Proposed areas of bulb planting - narcissus.

## ACADEMY BUSINESS PARK, KNOWSLEY

## PLANTING SCHEDULE

**Refer to drawing no. 2271_06-09 Rev E – UNITS 1A – 1H and 6A – 6G**

### TREES

| No's | Species | Abbrev. | Common name | Girth (cms) | Height (cms) | Form/Pot s |
|---|---|---|---|---|---|---|
| 5 | *Acer campestre* 'Elsrijk' | ACE | **Field maple cultivar** | 12-14 | 350/425 | RB |
| 3 | *Amelachier grandiflora* 'Robin Hill' | AGRH | **Juneberry tree** | 12-14 | 350/425 | RB |
| 16 | *Carpinus betulus* 'Streetwise' | CBS | **Fastigiate hornbeam** | 12-14 | 350/425 | RB |
| 12 | *Prunus avium* | PA | **Wild cherry** | 12-14 | 350/425 | RB |
| 16 | *Prunus* 'Kansan' | PK | **Japanese flowering cherry** | 12-14 | 350/425 | RB |
| 1 | *Quercus robur* | QR | **English oak** | 12-14 | 350/425 | RB |
| 8 | *Sorbus aucuparia* 'Joseph's Rock' | SAJR | **Mountain ash cultivar** | 12-14 | 350/425 | RB |

### SPECIMEN SHRUBS

| No's | Species | Common name | Height (cms) | Form/Pot size | Notes |
|---|---|---|---|---|---|
| 3 | *Phormium cookianum* 'Yellow Wave' | **Phormium** | 80/100 | 15L | |
| 3 | *Phormium* 'Sundowner' | **Phormium** | 80/100 | 15L | |
| 2 | *Phormium tenax* 'Purpureum' | **Phormium** | 80/100 | 15L | |
| 6 | *Photinia x fraseri* 'Red Robin' | **Christmas berry** | 120/150 | 18L | |
| 3 | *Viburnum plicatum* 'Mariesii' | **Viburnum** | 60/80 | 10L/ 7 breaks | |

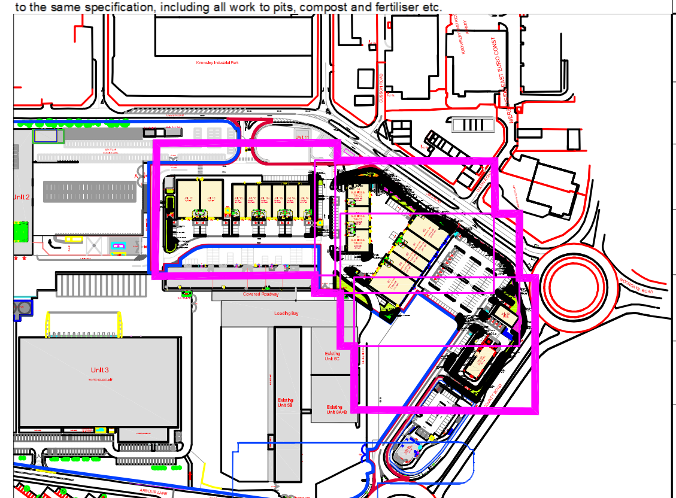
### SHRUBS

| No's | Species | Common name | Height (cms) | Form/Pot size | Density/m |
|---|---|---|---|---|---|
| 210 | *Berberis wilsonii* | **Barberry** | 30/40 | 3L/ 5 breaks | 3.5 |
| 50 | *Ceanothus* 'Blue Mound' | **California lilac** | 30/40 | 2L/ 3 breaks | 3 |
| 105 | *Choisya ternata* 'Sundance' | **Mexican orange blossom** | 30/40 | 5L/ 5 breaks | 3 |
| 111 | *Cornus alba* 'Ivory Halo' | **Dogwood cultivar** | 40/60 | 3L/ 5 breaks | 3 |
| 165 | *Elaeagnus x ebbingei* | **Silverberry** | 40/60 | 5L/ 5 breaks | 3 |
| 136 | *Escallonia* 'Apple Blossom' | **Escallonia cultivar** | 30/40 | 3L/ 5 breaks | 3 |
| 55 | *Euonymus fortunei* 'Emerald Gaiety' | **Fortune's spindle** | 30/40 | 3L/ 5 breaks | 3 |
| 175 | *Euonymus fortunei* 'Emerald n' Gold' | **Fortune's spindle** | 30/40 | 3L/ 5 breaks | 3 |
| 50 | *Hebe* 'Autumn Glory' | **Shrubby veronica** | 30/40 | 5L/ 5 breaks | 3 |
| 50 | *Hebe* 'Great Orme' | **Shrubby veronica** | 30/40 | 5L/ 5 breaks | 3 |
| 45 | *Hebe* 'Mrs Winder' | **Shrubby veronica** | 30/40 | 5L/ 5 breaks | 3 |
| 55 | *Hebe* 'Red Edge' | **Shrubby veronica** | 15/20 | 5L/ 5 breaks | 4 |
| 72 | *Hebe albicans* | **Shrubby veronica** | 30/40 | 5L/ 5 breaks | 3 |
| 88 | *Hebe rakaiensis* | **Shrubby veronica** | 30/40 | 5L/ 5 breaks | 3 |
| 40 | *Hydrangea arborencens* 'Annabelle' | **Hydrangea - white** | 40/60 | 5L/ 5 breaks | 3 |
| 285 | *Hypericum calycinum* | **Rose of Sharon** | 20/30 | 2L/ 3 breaks | 4 |
| 233 | *Lonicera nitida* 'Maigrun' | **Box-leafed honeysuckle** | 30/40 | 5L/ 5 breaks | 3 |
| 255 | *Mahonia aquifolium* 'Apollo' | **Oregan grape** | 20/30 | 3L/ 5 breaks | 3 |
| 53 | *Philadelphus* 'Manteau d'Hermine' | **Mock Orange** | 60/80 | 10L/5breaks | 4 |
| 105 | *Potentilla* 'Elizabeth' | **Shtubbu cinquefoil** | 30/40 | 3L/ 5 breaks | 3 |
| 24 | *Prunus x cistena* | **Dwarf red-leaf plum** | 40/60 | 3L/ 5 breaks | 3 |
| 40 | *Prunus laurocerasus* 'Zabeliana' | **Portuguese cherry laurel** | 40/60 | 5L/ 5 breaks | 3 |
| 192 | *Pyracantha coccinea* 'Red Cushion' | **Pyracantha** | 30/40 | 3L/ 5 breaks | 3 |
| 183 | *Rosa* 'Kent' | **Repeat flowering ground cover r** | 30/40 | 3L/ 5 breaks | 3 |
| 30 | *Rosmarinus officinalis* | **Rosemary** | 30/40 | 5L/ 5 breaks | 3 |
| 95 | *Santolina incisa* 'Crispa' | **Cotton lavender** | 30/40 | 5L/ 5 breaks | 4 |
| 202 | *Senecio* 'Sunshine' *(Brachyglottis)* | **Ragwort cultivar** | 30/40 | 3L/ 5 breaks | 3 |
| 247 | *Skimmia japonica* 'Rubella' | **Skimmia** | 20/30 | 3L/ 5 breaks | 3 |
| 275 | *Spiraea japonica* 'Goldflame' | **Japanese meadowsweet** | 20/30 | 2L/ 5 breaks | 4 |
| 45 | *Symphoricarpos x chenaultii* 'Hancock' | **Snowberry** | 40/60 | 2L/5 breaks | 3 |
| 95 | *Viburnum davidii* | **Viburnum** | 30/40 | 5L/ 5 breaks | 3 |
| 248 | *Vinca minor* 'Alba' | **Periwinkle** | 20/30 | 2L/ 5 breaks | 4 |

### HEDGING

| No's | Species | Common name | Height (cms) | Form/Pot size | Density/lin (double staggered r |
|---|---|---|---|---|---|
| 95 | *Lonicera nitida* | **Shrubby honeysuckle** | 20/30 | 2L/ 3 breaks | 4 |
| 185 | *Olearia x haastii* | **Daisy bush** | 20/30 | 2L/ 3 breaks | 4 |
| 560 | *Osmanthus x burkwoodii* | **Sweet olive** | 20/30 | 2L/ 3 breaks | 4 |
| 70 | *Viburnum tinus* 'Eve Price' | **Laurustinus** | 20/30 | 2L/ 3 breaks | 4 |

| | REVISIONS | |
|---|---|---|
| E | Revisions to environs and all shrub and grass areas due to layout revisions. | 27.07.22 |
| D | Revisions to environs to Unit 7A adjcaent existing road access. | 09.04.21 |
| C | Revisions to environs to Unit 6C and car parking to south of units 6. | 07.04.21 |
| B | Revisions to environs to Units 1 and 6. | 23.12.20 |
| A | Revisions to environs to Units 1A and 6C. | 31.07.20 |



Project
Academy Business Park, Knowsley

Title
Landscape Proposals - All site

Client
Orbit Developments

Date
July 2020

Scale
Not to scale

Drawn
LAC

Drawing No.
2271_10E

Checked
SW

Revision
E

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Landscape Institute
Registered practice

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